



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 2

290 BROADWAY

NEW YORK, NEW YORK 10007-1866

January 17, 2007

BY ELECTRONIC MAIL AND REGULAR MAIL

Mr. Christopher R.L. Colbourne
Vice President Design and Construction
Masterworks Development Corp.
56 West 45th Street, 4th Floor
New York, N.Y. 10036

**Re: Specification for Abatement and Selective Demolition
of 130 Cedar Street Building**

Dear Mr. Colbourne:

The United States Environmental Protection Agency (EPA) has reviewed the draft of "Abatement and Selective Demolition, 130 Cedar Street, New York, N.Y. 10006, October 2006" (Draft) initially submitted electronically on October 31, 2006 by RJ Lee Group, Inc. (RJ Lee) on behalf of Masterworks Development Corp. (Masterworks). On December 20, 2006, Laval Construction Corp. (Laval) on behalf of Masterworks submitted electronically a revised portion of the Draft, dated December 20, 2006. Section 2.0, Specification for Abatement and Selective Demolition, was revised and submitted on December 20, 2006 in response to verbal comments provided by the New York City Department of Environmental Protection (NYCDEP) to RJ Lee during a December 18, 2006 meeting of NYCDEP, RJ Lee, and Nova Development Group, Inc. (Nova) at NYCDEP's office. On December 20, 2006, Laval also submitted electronically a December 20, 2006 letter from Nova explaining the changes to the NYCDEP variance petition, a December 20, 2006 cover letter from RJ Lee detailing the modifications to Section 2.0, Specification for Abatement and Selective Demolition, and two appendices: Appendix C (Scope of Work Roof Clean Up and Search for Potential Human Remains) and Appendix D (130 Cedar Street Chronological List of Work Activities).

The draft documents were also provided for review to the U.S. Department of Labor Occupational Safety and Health Administration (OSHA), New York State Department of Environmental Conservation (NYSDEC), and NYCDEP. EPA's comments are attached.

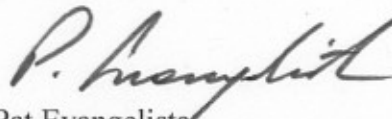
The regulators reserve the right to modify the attached comments and/or make additional comments about the proposed work if new information becomes available, or information, currently known and considered, is changed in whole or in part during the abatement and selective demolition project. The attached comments do not pertain to any matters not addressed in the documents reviewed. In the event that the plans for the abatement and selective demolition have to be supplemented as the project proceeds, the regulators will review and may provide additional comments after we review the supplementary information and documents submitted by Masterworks and/or its environmental consultant(s) or contractor(s).

To explain the revisions to the Draft, EPA requests that Masterworks provide the regulators with a separate response to each of the attached comments that states: (1) whether the comment has been incorporated into the revised draft submission; (2) if a comment has not been incorporated, the reason it was not incorporated; and, (3) any additional information to address Masterwork's response to the attached comments. The supplement will facilitate the regulators' review process. Kindly let us know Masterworks' schedule for submitting the revised draft submission.

We look forward to your response to our comments and our acceptance of your plans prior to your commencement of work.

If you have any questions please contact Mr. Emmet C. Keveney, P.E., of my staff at (212) 637-3459.

Sincerely,



Pat Evangelista
WTC Coordinator
New York City Response and Recovery Operations

Enclosure

cc: Sal Carlomagno, NYSDEC w/encl.
Chris Alonge, NYSDOL w/encl.
Krish Radhakrishnan, NYCDEP w/encl.
Richard Mendelson, OSHA w/encl.
Robert Iulo, NYCDOB w/encl.

Section 2.0

Specification for Abatement and Selective Demolition

General Comment:

1. The revised Specification for Abatement and Selective Demolition (Section 2.0) dated December 20, 2006 does not include the following appendices: (1) Appendix C: Spandrel Walls; (2) Appendix D: Selective Demolition Drawings; (3) Appendix E: Schedule; (4) Appendix F: Site Logistics Plan; and (5) Appendix G: Building Façade Clean Up Procedure. These appendices were in the original October 2006 version of the document and are referenced in the December 2006 version of the document. Please clarify if they will be omitted from the final version of the document or were inadvertently not included with the revised December 2006 version of the document.

2. Reference is made to a New York City Department of Environmental Protection variance, variance attachments, and ACP-9 throughout Section 2.0. These documents have not been included. These documents should be included as appendices to this section and submitted.

3. A selective demolition plan should be provided that discusses the details of the selective demolition phase and its sequencing with the abatement phase. For example, what are the means and methods for the demolition activities that will be conducted in areas not under containment and during the selective demolition stage? Many of these selective demolition activities will be conducted simultaneously with the abatement phase and the regulators wish to ensure that the selective demolition activities will not cause a potential release of contaminants into the environment.

(4) What are the means and methods for the demolition activities that will be conducted under containment in this specification? This should be clarified in this subsection.

Specific Comments:

Subsection 1.0 Introduction:

5. Please clarify in this subsection what is the “west wall – southern third,” the “west wall – northern third,” and the “bay north of the stairwell and elevator core on the west wall”.

6. This subsection discusses five general types of construction/cross section for the building and discusses which sections have already been determined to need to be removed under full containment procedures. Please provide a figure(s) which shows the actual surface areas of the building that have already been determined to need to be removed under full containment and that shows what is referred to as the “bay north of the stairwell and elevator core on the west wall”.

7. The seventh paragraph discusses the type of construction/cross section for the “west wall – stairwell & elevator core”. However, it does not state if any portions of the west wall – stairwell and elevator core will be removed; and if so, will it be removed under full containment procedures. Please provide clarity within this subsection.

8. Page 3 of this subsection states that breaches are especially evident on the exterior of floors 10, 11 and 12 on the northern third of the east side and on the north side and refers to Appendix C. The revised Specification for Abatement and Selective Demolition (Section 2.0) dated December 20, 2006 does not include an Appendix C as noted under our “general comments”. Appendix C referenced in the October 2006 version of Section 2.0 does not provide clarity on the areas being discussed in this subsection. Please provide a figure which shows the actual surface areas on these floors that have already been determined to have been breached and need to be removed under full containment.

9. What is the purpose of Appendix C as specified in the October 2006 version of Section 2.0? Is one of the purposes to show the areas of each floor that will and will not be demolished? If so, it is not clear what will and will not be demolished since no legend(s) has been provided (e.g., what does the solid and dashed lines represent?). What do the numbers, “drill”, “other”, and “WC test” stated throughout Appendix C represent?

10. Pages 2 and 3 of the revised December 2006 version of Section 2.0 now contain three definitions: (1) “a breach”; (2) “a general breach”; and (3) “a localized breach”. The October 2006 version of Section 2.0 only contained one definition, “a breach”. The straightforward definition of “a breach” in the October 2006 version of Section 2.0 has remained the same in the December 2006 version of Section 2.0. However, the two additional definitions added to the December 2006 version of Section 2.0 discusses breaches that allow air flow to greater than or less than 25% of the interstitial space.

- (a) Why have these additional definitions for breached areas been incorporated into Section 2.0?
- (b) How can solely visual inspections from the scaffolding during the façade cleanup determine if “25%” of an interstitial space has or has not been breached?

11. The last sentence of the second paragraph on page 3 needs to be revised to state that both the façade cleanup visual inspection and the previously conducted visual inspection of the interior bays and the exterior bays on the roof parapet, 12th, and 1st floors will determine the containment set-up/construction.

12. The second to last paragraph on page 3 states that any bays found not to have been damaged or breached will be consider free of interstitial WTC dust and only the exposed surfaces of the wall units will be cleaned as describe in this specification and that these cleaned wall units will subsequently be demolished as part of the demolition phase. Section 2.0 (Specification for Abatement and Selective Demolition) should include a subsection that describes provisions to identify, assess, and address any potentially contaminated hidden interstitial spaces and voids that become apparent during the

selective demolition phase of the project, which may not have been apparent during the visual inspections conducted during the abatement phase.

Subsection 2.1 Phase I: Abatement to Develop a “Clean Zone”:

13. This subsection states that final air clearance sampling will be performed. Please clarify in this subsection what parameters will be sampled and the levels that will need to be met. Will the approach for the final air clearance for the “shanty space” be the same as the approach for the personnel, ACM/hazardous waste, and non-porous scrap decontamination units?

14. This subsection states that Phase I abatement will be performed to establish a “Clean Zone” to construct personnel, ACM/hazardous waste, non-porous scrap decontamination units, and shanty space. However, the first two bullet items conflict with this statement. The first two bullet items discuss the abatement and demolition of windows, window caulking, and spandrel walls. Subsection 2.0 (Project Phasing and Specific Procedures) states that abatement of the basement through floor 8 will not occur until Phase III and selective demolition until Phase IV. Please clarify what is actually planned to be conducted under “Phase I: Abatement to Develop a “Clean Zone”” within Subsection 2.1.

15. The first bullet item discusses the abatement and demolition of windows, window caulking, and spandrel walls that have been “damaged or breached”. Into which of the three definitions of breached stated on pages 2 and 3, “a breach”, “a general breach”, or “a localized breach”, does this bullet item and “damaged or breached” apply to? If the owner and its environmental consultant wish to continue to use three definitions for breached areas, then this nomenclature should be used consistently throughout the document to avoid even further confusion.

16. The first sentence of the fourth bullet item is incomplete. It makes reference to a dimension of 2”x4”, but does not clarify what those dimensions refer to?

17. The ninth and tenth bullet items state that the southeastern third of the first floor, the loading dock area, and the main stairwell from the basement to the roof will become the first “Full Containment” that will be abated. In what phase will the activities discussed in the ninth and tenth bullet items be conducted because it is not discussed in any of the other phases described in Subsection 2.0 (Project Phasing and Specific Procedures). This subsection (i.e., 2.1) states that Phase I is to establish a “Clean Zone” to construct personnel, ACM/hazardous waste, non-porous scrap decontamination units, and shanty space? Details should be provided within Subsection 2.0 on how it will be cleared and how many samples will be taken to clear the stairwell.

18. The sixth bullet item on page 5 discusses the cleaning of elevator door and frames.

- (a) What will be the procedure for cleaning the freight elevator car prior to its use to transport personnel wearing appropriate PPE from the work areas to the dirty

room and what will be the procedure for cleaning the freight elevator car at the end of the project?

- (b) What will be the procedure for cleaning the other elevator cars to be sealed off?
- (c) How many elevators are within the building?
- (d) This bullet item discusses a visual inspection by the environmental consultant. This bullet item should be revised to state that EPA and NYCDEP will conduct a visual inspection after the environmental consultant determines that the elevators are ready for a final visual inspection by the regulators prior to encapsulation.

19. What is being implied in the first bullet item on top of page 6? Clarify how the stairwell will be used after it has been cleaned. Will personnel go through the cleaned stairwell to reach a decon area or will they don PPE (and potentially re-contaminate the cleaned stairwell) to go through the cleaned stairwell area to reach work areas?

20. How will the bagged waste from the gross cleaning of Phase I discussed in the eleventh bullet item be disposed? This should be clarified in this subsection or a reference should be made to the section/subsection where it is clarified.

21. The twelfth bullet item states that slab penetrations will be sealed off. This subsection should state how these slab penetrations will be cleaned and sealed off.

22. The fourteenth bullet item states that final air and surface wipe clearances will be performed after the final cleanings and a visual inspection by the Environmental Consultant. An additional sentence should be added to this bullet item to state that the final air and surface wipe clearances will not be performed until EPA and NYCDEP conduct a final visual inspection subsequent to being notified by the Environmental Consultant, based on its visual inspection, that the work area is ready for a final visual inspection by the regulators.

23. What are the final air and surface wipe clearance parameters and levels that are being used? What about the microvac sampling that is discussed in Section 3.0 (Specification for the Removal of the Building from Containment)? This should be clarified in this subsection.

Subsection 2.2 Phase I A: North, East & South Exterior Façade Clean Up:

24. The last sentence of the second bullet item in this subsection is incomplete. It makes reference to a dimension of 2"x4", but does not clarify what those dimensions refer to?

25. The second bullet item in this subsection that starts with the statement, "Final cleaning and clearance of the "Clean Zone" will not be performed until the exterior façade wash down is complete," should also be added after the 12th bullet item in the previous subsection (Subsection 2.1) as well as remaining within this subsection.

Subsection 2.3 Phase I B: West, 90 West Courtyard, Exterior Façade Clean Up:

26. Please re-write the first sentence to provide clarity on what is being cleaned. Is it the west exterior façade, the 90 West Courtyard, and/or the 90 West exterior façade?

27. The first bullet item states that the scaffold and counterweights will be erected on the roof. Will measures be taken to prevent the disturbance of dust on the roof prior to and during the installation of the scaffolding and the counterweights? Will that portion of the roof to be used for the preparation for, and installation of, the scaffold and counterweights be cleaned during Phase I B? Please clarify in this subsection.

28. The last sentence of the last bullet item in this subsection is incomplete. It makes reference to a dimension of 2"x4", but does not clarify what those dimensions refer to?

Subsection 2.5 Phase III: Abatement Preparatory Work:

29. The first paragraph discusses using the clean main stairwell to access areas for "final cleaning". Provide further clarity on how you would access work areas for "final cleaning" without re-contaminating the previously cleaned stairwell.

30. Language should be added to the second paragraph to state that any penetrations to the outside of the building that were previously sealed off to prevent air flow from the inside to the outside will be re-inspected by the environmental consultant during the abatement prep work of each work area to ensure that there have been no breaches since the penetrations were initially sealed. If a breach has occurred, appropriate corrective actions will be taken to re-seal the area(s).

31. The last paragraph discusses a "gap" that needs to be abated at the beginning of the paragraph and then discusses an "inaccessible wall of 90 West St." that needs to be cleaned at the end of the paragraph. Please clarify in this subsection if the "gap" to be abated is the same as the "inaccessible wall of 90 West St." that needs to be cleaned.

Subsection 2.6 Phase III A: Abatement of the Penthouse Engineer's Office, Elevator Mechanical Room & Storage Rooms:

32. The first and third bullet items state that personnel and waste decontamination units and a hard barrier tunnel along the penthouse will be installed on the roof. However, there is no discussion on if those portions of the roof to be used for the aforementioned installations will be abated and cleared prior to their installation. This comment also applies to the last paragraph of subsection 2.9 which states that the personnel and waste decontamination units will be torn down but does not discuss the abatement and clearing of the surface area beneath them. Subsection 2.0 (Project Phasing and Specific Procedures) should be revised to discuss this issue.

33. The fifth bullet item discusses “gross abatement in the elevator mechanical rooms” and some type of “exhausting”. Please clarify if venting to the outside air and what engineering controls will be in-place for the vented air.

34. The fifth bullet item discusses elevator mechanical rooms while subsection 2.12 only discusses an elevator mechanical room. Clarify how many elevator mechanical rooms are involved with this project and revise the plan as needed.

35. The seventh bullet item discusses a visual inspection by the environmental consultant. This bullet item should be revised to state that EPA and NYCDEP will conduct a visual inspection after the environmental consultant determines that the area(s) is ready for a final visual inspection by the regulators prior to the encapsulation of the area(s) and prior to the conduct of the final clearance sampling.

36. Why does the seventh bullet item discuss at the end of the paragraph the visual inspection, encapsulation, and final air clearance of the penthouse engineer’s office but does not state that these same procedures will be followed for the storage rooms, tunnels, and the personnel and waste decontamination units? The beginning of the bullet item states that all of the aforementioned areas will be undergoing a final cleaning.

Subsection 2.7 Phase III A1: Abatement/Demolition of the West Roof Parapet Walls and 90 West St. Façade Clean Up:

37. The first bullet item states that the fully functional personnel and waste decontamination unit erected for Phase III A will be utilized for the Phase III A1 work. Further, the last bullet item of this subsection states that the personnel and waste decontamination unit will be utilized for Phase III B and Phase III C. How is this possible if the plan states in subsection 2.6 that the personnel and waste decontamination units will be undergoing a final cleaning in Phase III A? If they are re-used for Phases III A1, III B, and III C these areas will be re-contaminated. The plan needs to be revised to provide clarity.

38. Clarify in the third bullet item when the brick and concrete will be HEPA vacuumed. Prior to or after the parapet walls are demolished into the enclosures?

39. Clarify in the third bullet item where will the “designated area” be for the storage of the HEPA vacuums for a NYC Office of Chief Medical Examiner (OCME) inspection. The vacuum bags need to be stored to ensure that there is no potential release from these bags. This comment also applies to bullet item #4 on page 11 of subsection 2.8 and bullet item #6 on page 13 of subsection 2.10.

40. The fourth bullet item discusses disposing of the brick and concrete as ACM contaminated. This bullet item should be revised to state that the brick and concrete will be disposed as asbestos waste at a minimum, and depending on the waste characterization results of representative dust samples from the brick and concrete or representative bulk and/or core samples of the materials including any settled/entrained dust. If

representative waste characterization sampling has already been completed, please discuss the conclusions of those sampling activities in this subsection. This comment also applies to bullet item #5 on page 11 of subsection 2.8, to the bagged roof debris specified in the fourth paragraph of subsection 2.9, and to bullet item #7 on page 13 of subsection 2.10.

41. The sixth bullet item states: “Any horizontal surface uncovered that has collected dust will be HEPA vacuumed with the OCME dedicated HEPA-Vacuum.” Please clarify in this bullet item what is being referred to as “any horizontal surface uncovered”. This comment also applies to bullet item #8 on page 13 of subsection 2.10.

42. The seventh bullet item of this subsection states that a low-pressure power wash of the wall of 90 West Street will be conducted per the Building Facade Clean Up procedure (Appendix G). How will the run-off water be collected at the bottom of the building? This bullet item should reference subsection 7.4 (Exterior Wash Water) of Section 7.0 (Waste Sampling and Management Plan) which discusses how the wash water will be managed, stored, and disposed.

43. What area or areas are being referred to with regard to the visual inspection and final air clearance in the eighth and ninth bullet items? Additional language should be added to provide clarity.

44. The eighth bullet item should be revised to state that EPA and NYCDEP will conduct a visual inspection after the environmental consultant determines that the area(s) is ready for a final visual inspection by the regulators prior to the conduct of the final clearance sampling.

Subsection 2.8 Phase III B: Abatement of Floors 10, 11 & 12:

45. The first paragraph states that “most of the north side” will be conducted using exterior wall containment option #2. Has the environmental consultant determined yet what portion of the north side will be conducted under option #2? If not, language needs to be added which states how the extent of the north side to be conducted under option #2 will be determined. How will the remaining balance of the wall be addressed? Please clarify.

46. The second bullet item states that you will begin the demolition of the west wall of the building from the bottom of the wall on the lowest floor of containment, floor 10. Is there any issue with the walls above collapsing from starting from the lowest point of the 10th floor wall? Please clarify in this subsection. This comment also applies to the fourth bullet item on page 13 of subsection 2.10.

47. The third bullet item discusses sealing the gap from the “building floor 10 deck”. Is there an access point to the “deck” within the courtyard? Subsection 2.5 states that the gap will be sealed using a swing scaffold for the courtyard sides. Please clarify how the

gap for floors 10 through 12 will be sealed. Since these two subsections contradict one another.

48. The eighth bullet item discusses power washing the 90 West Street wall where there are no window wells. Will “any horizontal surface” in addition to the window wells discussed in the sixth bullet item be power washed as well? Please clarify in this subsection.

49. The last paragraph on page 11 of this subsection discusses the abatement of the back stairwell. Clarify in this paragraph if the back stairwell is an interior stairwell or an exposed exterior stairwell. In addition, clarify in this paragraph if a hard walled barrier needs to be installed above/at the 12th floor to conduct the abatement of the back stairwell from floors 10 through 12. If not, why not?

50. (a) The fourth to last paragraph of this subsection discusses the abatement of floor 10. What about floors 11 and 12 that the title of this subsection states will be abated during Phase III B? Revise this subsection to discuss the abatement, final visual inspection, and final clearance of these floors. Further, provide clarity on if all three floors will be designated as a single work area.

(b) Provide clarity on the designation of work areas for the entire building and their sequencing within the phases discussed in Section 2.0.

51. The third to last paragraph discusses the installation of a hard barrier seal in the shaft at the floor 10 deck to abate the passenger elevator shaft. Clarify in this bullet item if a hard wall barrier needs to be installed above the 12th floor shaft to conduct the abatement of the passenger elevator shaft from floors 10 through 12. If not, why not?

52. The second to last paragraph discusses a visual inspection by the environmental consultant. This bullet item should be revised to state that EPA and NYCDEP will conduct a visual inspection after the environmental consultant determines that the areas are ready for a final visual inspection by the regulators prior to final clearance sampling.

53. It is not clear from the second to last paragraph what are the work areas for Phase III B. This should be clarified. The back stairwell and the passenger elevator shaft would need to be two separate work areas from floors 10 through 12 and would have to be cleared and sampled separately from the floor clearance activities. Clarify how many samples will be taken from the stairwell and the elevator shaft.

Subsection 2.9 Phase III C: Roof Abatement (Main Roof, Bulkhead Roofs, 10, 11, 12 Floor Terraces):

54. The first paragraph states the following: “The OCME investigation of these roofs will take place before any roofing material abatement occurs.” Clarify in this subsection if the OCME investigation will follow the procedures identified in Appendix H (Roof Clean Up and Search for Potential Human Remains).

55. Clarify in this subsection if Appendix H will also be used to conduct the abatement of the “roofing material” referenced in this subsection. Specify what “roofing materials” will be abated on the roof and the terraces of floors 10 through 12 and what will be removed as part of the abatement and will remain after the abatement.

56. The third paragraph states that the roof will be abated by NYCDEP variance Attachment FR, FT & R per the ACP-9. This subsection does not state how the terraces on floors 10 through 12 will be abated. Clarify in this subsection if it will be under the variance referenced in the third paragraph, a separate variance, and/or Appendix H.

57. Clarify in this subsection if the temporary roof/impermeable barrier to be installed on floor 10 will encompass the entire surface area of the 10th floor or is it in reference to only the 10th floor terrace that is being abated as part of Phase III C.

58. Clarify in this subsection if there will be any critical barriers already in-place or installed prior to abating the terraces on floors 10, 11, and 12 to prevent the re-contamination of the interior of floors 10 through 12 abated and cleared during Phase III B.

59. This subsection discusses a visual inspection by the environmental consultant of the roof and the terraces on floors 10 through 12. This subsection should be revised to state that EPA and NYCDEP will conduct a visual inspection after the environmental consultant determines that the areas are ready for a final visual inspection by the regulators prior to any installation of temporary roofs/impermeable barriers.

60. Specify in this subsection what the temporary roofs/impermeable barriers will consist of.

Subsection 2.10 Phase III D: Abatement of Floor 9:

61. It is not clear from the second to last paragraph what are the work areas for Phase III D. This should be clarified. The back stairwell and the passenger elevator shaft would need to be two separate work areas from the 9th floor and would have to be cleared and sampled separately from the floor clearance activities. Clarify how many samples will be taken from the stairwell and the elevator shaft.

62. The third to last paragraph discusses installing a hard barrier seal at the 9th floor deck to abate the passenger elevator shaft. Will the hard barrier seal installed for the 10th floor during an earlier phase still be in place for the cleaning of the elevator shaft for the 9th floor? Please clarify.

63. The second to last paragraph discusses a visual inspection by the environmental consultant. This subsection should be revised to state that EPA and NYCDEP will conduct a visual inspection after the environmental consultant determines that the areas

are ready for a final visual inspection by the regulators prior to the conduct of any final clearance sampling.

Subsection 2.12 Phase IIIJ: Freight Elevator:

64. The second and third to last paragraphs discuss a visual inspection by the environmental consultant. This subsection should be revised to state that EPA and NYCDEP will conduct a visual inspection after the environmental consultant determines that the areas are ready for a final visual inspection by the regulators prior to the conduct of any final clearance sampling.

Subsection 2.13 Phase IV: Selective Demolition:

65. The first paragraph states that the hoist will be tied into the building by exposing spandrel areas of the concrete slab and/or column by removing the attached brick from the outside. This subsection does not discuss the procedures to be followed to properly abate a tie-in area if it has been determined that the building has been breached in the general area of the location of the tie-in. Section 2.0 states that the determination of breached areas has not been completed and will be conducted during the exterior façade clean-up in phases IA and IB. Consequently, this subsection should be revised to state the procedures to be followed if any of the tie-in locations are found to be in an area determined to have been breached during the forthcoming visual inspections.

Subsection 2.14 Phase V: Re-Construction::

66. This subsection states that when Phase IV (Selective Demolition) has reached the 5th floor, re-construction will begin. Please clarify in this subsection on what floor will the remaining abatement work be conducted once re-construction begins. Based on subsection 2.13, a four floor buffer zone will be maintained between abatement and demolition. Consequently, please confirm in this subsection that the only remaining abatement work will be in the basement once re-construction begins.

Subsection 3.0 Contaminated Materials to be Remediated During Abatement Phase:

67. The first paragraph discusses the cleaning of horizontal surfaces. What about vertical surfaces? This should be discussed as well.

68. The sixth bullet item states that all non-porous materials, including furniture, will be cleaned and removed from the work area. This subsection and Section 7.0 (Waste Sampling and Management Plan) should clarify that any wood materials, including wood furniture, are considered porous materials and will be disposed as asbestos waste, at a minimum, and depending on the waste characterization results of representative dust samples from the porous material or representative bulk and/or core samples of the porous materials including any settled/entrained dust. If representative waste characterization sampling has already been completed, please discuss the conclusions of those sampling activities in Section 7.0.

69. The tenth bullet item states that all dust detected in an interstitial space or wall cavity will be low pressure power washed in the same way as the exterior façade. This appears to contradict the earlier subsections which discuss HEPA vacuuming and wet wiping after demolition of the walls based on options #1, #1A, or #2.

70. The last bullet item should be revised to state that the final air clearance sampling and surface sampling will not be performed until EPA and NYCDEP conduct a final visual inspection of the work area subsequent to being notified by the Environmental Consultant, based on its visual inspection, that the work area is ready for a final visual inspection by the regulators.

Subsection 10.0 Worker Protection During Abatement Phase:

71. Clarify in the second bullet item if full-face or half-face respirators will be used for preparation activities.

Subsection 11.0 Disposal Requirements During Abatement Phase:

72. This subsection discusses disposal requirements for the asbestos waste but does not reference the disposal options for other waste streams that may be generated during the project (e.g., hazardous waste, etc.). At a minimum, this subsection should be revised to reference Section 7.0, Waste Sampling and Management Plan, for the handling, management, and final disposal options for the other waste streams.

73. The last sentence of this subsection makes reference to a “Specification for Waste Stream Classification”. What is this in reference to? Does this pertain to Section 7.0, Waste Sampling and Management Plan? If so, the sentence should be revised to reference the correct section.

Subsection 12.0 Ambient Air Monitoring During Abatement Phase:

74. This subsection discusses the asbestos air monitoring to be conducted to be in compliance with the NYCDEP and NYSDOL regulations during the abatement phase. Since ambient air monitoring will be conducted during both the abatement phase and the selective demolition phase as referenced in Section 4.0, Specification for Community Air Monitoring, this fact should also be stated in this subsection. It is recommended that the title of the subsection be revised to state, “Ambient Air Monitoring During Abatement and Selective Demolition Phase”.

Appendix A: Exterior Wall Containment Barrier Option 1:

75. Option #1A: The third sentence is incoherent. Please clarify this sentence.

76. Option #1A: Clarify in the second to the last paragraph the following wording: “the inside surface if the brick cladding”.

77. Option #1A: This option should be revised to clarify that the surfaces will be cleaned and encapsulated after the completion of the abatement of the windows and the window caulking.

78. Option #1B: This option should be revised to clarify that the wall surfaces will be cleaned and encapsulated after the completion of the abatement of the windows and the window caulking.

Appendix C and Appendix H: Scope of Work: Roof Clean Up & Search for Potential Human Remains:

79. The first sentence of item #3 in Appendix C makes it unclear on how personnel will come out of the building. It should be clarified.

80. The last paragraph discusses the number of samples to be collected. How was the number determined?

Appendix D: Selective Demolition Drawings:

81. Sheet A1-0 has a section titled, “Related Work”. This section states the following: “See JLC abatement contract drawings and specification for coordination and extent of abatement work”. Why is this document referenced? What about the RJ Lee submission with regard to the specifications for the abatement and selective demolition of the building? Which will be followed? This section should reference the correct document(s).

Appendix E: Schedule:

82. The tentative schedule should be revised.

Appendix F: Site Logistics Plan:

83. The drawing shows the location of the storage containers for friable and non-friable asbestos waste. The drawing should also show the location of the storage area(s) for the other waste streams (e.g., hazardous waste, PCB ballasts, etc.) specified in Section 7.0, Waste Sampling and Management Plan.

Appendix H: Roof Clean Up & Search for Potential Human Remains:

84. Item #9 states that the ballast will be replaced to their original location. This statement conflicts with the general notes of Drawing D1-1 of Appendix D, Selective Demolition Drawings, which states that roofing system, including, but not limited to ballast, membranes, insulation, accessories, etc. will be removed. Clarify in Appendix H.

85. Appendix H discusses the cleaning procedure for the ballast but does not discuss the approach to be taken for the abatement and removal of the other elements of the roofing systems (e.g., ballast, membranes, insulation, accessories, etc.) for the main roof, bulkhead roofs, and the 10th, 11th, and 12th floor terraces. This information should be provided.

Section 3.0
Specification for the Removal
of the Building from Containment

Subsection 2.1 Metals – Air Samples:

1. The following ***bold italic*** language should be added to the last paragraph of this subsection as was done for subsection 2.2 (Asbestos – Air Samples) to clarify that these procedures should be followed for both the metals and asbestos clearance sampling:
“The number of samples per containment area as determined by the Environmental Consultant will be a minimum of five (5) ***and not less than five (5) samples per floor. The elevator shaft(s) and stair wells will have to be sampled and cleared separately from floor clearance activities.***”

Subsections 2.3 Lead – Wipe Samples and Subsection 2.4 Asbestos – Microvac Samples:

2. Understanding that the remaining structure will basically include encapsulated floors and structural members which will have passed final regulatory visual inspection and air clearance testing, what is the purpose of the surface wipe and microvac sampling?

Section 4.0 Specification for Community Air Monitoring

General Comment:

1. Please be cognizant that many of the comments below on the Specification for Community Air Monitoring (e.g., parameters to be sampled and analyzed, duration, number of air sampling stations, etc.) will impact the requirements and information needed for the Quality Assurance Program Plan.

Specific Comments:

Subsection 2.0 (Environmental Air Monitoring):

2. The second bullet item states that the interior and exterior walls will be removed during the selective demolition phase leaving the concrete columns and floor. Please clarify if all of the interior and exterior walls will be removed or if portions will remain. If portions will remain, please clarify this with a detailed figure showing those portions that will remain and revise the second bullet item if not all of the walls are being removed as part of this project.

Subsection 2.1 Abatement Phase:

3. It is recommended that this subsection, and its reference in the Table of Contents, be titled “Abatement Phase – Visible Emissions” since this subsection pertains to procedures to be followed for the observation of visible emissions as opposed to the air monitoring procedures.

4. The following ***bold italic*** language should be added to the first sentence of the second paragraph: “If any visible emission is noted exterior of the work area, ***the work will be stopped and*** the Environmental Consultant will perform an immediate evaluation of in-place engineering controls for the emission location.”

5. Re-word the last sentence of the second paragraph to read: “The work will not restart until engineering controls are repaired or determined to be functioning properly.”

Subsection 2.2 Demolition Phase:

6. It is recommended that this subsection, and its reference in the Table of Contents, be titled “Demolition Phase – Visible Emissions” since this subsection pertains to procedures to be followed for the observation of visible emissions as opposed to the air monitoring procedures.

Subsection 2.3 Notification:

7. It is recommended that this subsection, and its reference in the Table of Contents, be titled “Notification – Visible Emissions” since this subsection pertains to notification procedures to be followed for any observation of visible emissions as opposed to the notification of any air monitoring levels.

8. Re-word the first sentence of this subsection to read: “The EPA Region 2 office and NYCDEP will be notified promptly of any visible emissions observed by the Environmental Consultant to cross the property line of the Building, and the Environmental Consultant will subsequently promptly advise the EPA Region 2 office and NYCDEP of the corrective actions taken.”

Subsection 2.4 Air Sampling and Analytical Methodology:

9. The following ***bold italic*** language should be added to the following sentence of this subsection: “Generally, sampling will be performed once each 24 hour work period, except for asbestos transmission electron microscopy (TEM) samples, which will be taken for the duration of every ***work shift and once a day during non-work days*** during the abatement ***and selective demolition*** phase.”

10. Table 1 (Sampling Methodologies) and the text of this subsection states that mercury monitoring is limited to real-time vapor phase mercury. However, subsection 3.0 (Community Air Monitoring) states that airborne mercury will be sampled and submitted for analysis. Subsection 2.4 (Air Sampling and Analytical Methodology) and its table should indicate that integrated sampling for total mercury (i.e., EPA Method 324 or equivalent) will be performed.

11. Based on Table 1 of this subsection there are currently no plans to include organic sampling for the background, abatement, and selective demolition phases. Sampling and analysis for the following semi-volatile organics should be included for the background, abatement, and selective demolition phases: dioxins/furans, polychlorinated biphenyls (PCBs), and polycyclic aromatic hydrocarbons (PAHs).

12. During the background phase organic samples should be collected from at least two ground level air stations and two roof level air stations once per week and analyzed following the procedures set forth below in comment #13.

13. The following language should be added to this subsection as well with regard to the organic sampling:

“Organic compound samples will be collected at specified points along the project schedule as follows: Organic samples will be collected at each community monitoring location at least once a week on a consecutive different day of the work week (e.g., week #1 on Monday, week #2 on Tuesday, etc.) during the abatement phase and the selective demolition phase, until all days of the work week are used. The schedule will be repeated until project completion. The semivolatile organic samples collected employing this

sampling frequency will not be processed for analyses; rather they will be placed in archival storage at the laboratory. A single set of samples will be selected from each weekly sampling event to undergo analyses for PCDDs/PCDFs, PAHs and PCBs. Samples from the location with the highest particulate readings (i.e., 24-hour average PM₁₀ concentration) for that day will be submitted for analysis each week. This will result in the processing of the samples that have the best likelihood of representing the “worst case.”

14. A filter-based PM₁₀ and PM_{2.5} reference method sampler or TEOM (Tapered Element Oscillating Microbalance) to be collocated with the real-time PM₁₀ and PM_{2.5} monitors should be included as a quality assurance (QA) check. Samplers can rotate on a monthly basis through all real-time PM₁₀ and PM_{2.5} monitor locations (with the exception of the scaffold monitor) throughout the duration of the project. This information should be included in Table 1 and within the text of this subsection.

15. Why has the owner included “respirable dust” and “WTC dust” in Table 1 since there are no target and trigger levels specified for them in Table 3? The parameters already specified with their respective target and trigger levels in Table 3 are based on potential contaminants of potential concern associated with dust from the collapse of the World Trade Center (WTC). It is recommended that these two parameters be removed from Table 1 and within the text of Subsection 2.4.

16. There is conflict within Section 4.0 (Specification for Community Air Monitoring) on the duration that silica samples will be taken. Table 1 in subsection 2.4 states that the duration per day for silica sampling will be 24 hours. Table 2 in subsection 5.0 states that silica will be sampled and analyzed for each work shift. This discrepancy needs to be clarified and any language that pertains to silica, and the duration the sample will be taken for each day, needs to be modified within Section 4.0.

17. This subsection states the following: “At a minimum, mercury readings will be taken twice per shift at the fixed air monitoring locations (seven during the abatement phase and three during the selective demolition phase) once after all shift air samples are initialized and once before the shift samples are collected.” Currently, Section 4.0 (Specification for Community Air Monitoring) only discusses a total of four air sampling locations. So it is unclear what is the reference to “seven” during the abatement phase and “three” during the selective demolition phase? Please clarify in this subsection where the mercury readings are going to be taken using the Lumex instrument.

Subsection 3.0 Community Air Monitoring:

18. There is a conflict on the number of, and location of, air monitoring stations for the project. The first sentence of this subsection states that four exterior air monitoring stations will be placed at street level. However, later in the subsection, it states that there will only be three air monitoring stations at street level and that a fourth will be located on the roof initially and later moved to the scaffold. Nonetheless, the number of air monitoring stations needs to be increased from a total of four to, at a minimum, eight air

monitoring stations. The drawings (“Street Level Community Air Monitoring Locations” and “Elevation – Air Monitoring Station Location”) and the text of this subsection will need to be revised after a discussion occurs with the regulatory agencies on the location of, and number of, air monitoring stations and the actual sequencing of work. Additional air monitoring stations may be needed on the roof if abatement work will be conducted on the roof level simultaneously with abatement work at lower levels of the building.

19. This subsection states that one of the proposed monitoring locations is the courtyard between 130 Cedar Street and 90 West Street at street level. However, the drawing on page 4 that shows the location of the air monitoring stations at street level states the following: “Courtyard between ground floor and 2nd floor.” Please clarify if this location is actually at street level or if it is at an elevation above street level. If at elevation, what is the elevated distance above street level?

20. This subsection states the following: “The community monitoring program will be performed at the four (4) locations six days per week (excluding Sunday unless Sunday is a work day in which case monitoring will be done on Sunday). Four (4) analytes will be sampled and submitted for analysis (metals, asbestos, crystalline silica, and airborne mercury - one for each work day period, from each community monitoring location, during each work day, including Sunday if it is a work day.” This section needs to be revised to clarify that community air monitoring for all of the parameters referenced in Table 3 (Target Air Quality Levels and EPA Site Specific Trigger Levels) need to be monitored, sampled, and analyzed for, 24-hours per day, seven days a week during both the abatement phase and the selective demolition phase. The exception being asbestos, real-time PM₁₀ and PM_{2.5}, and mercury vapor. Asbestos TEM samples which will be taken for the duration of every work shift and once a day during non-work days, while PM₁₀ and PM_{2.5} measurements will be collected on a continuous near “real time” basis, and mercury vapor employing the Lumex instrument.

21. The owner’s proposal for the location of the air monitoring stations for the 10-day background sampling will need to be revised based on the revisions to be made to the location of, and number of, air stations. During the background phase samples should be collected and analyzed from at least two ground level air stations and two roof level air stations.

22. Please add the following language to the end of this subsection: “If the community air monitoring locations need to be changed due to site conditions, NYCDEP and the USEPA Region 2 office will be notified promptly. The community air monitoring locations will not be moved until NYCDEP and the USEPA Region 2 office accept the change.”

Subsection 4.0 Abatement Phase Air Monitoring:

23. This subsection only discusses asbestos sampling to satisfy the New York City Department of Environmental Protection (NYCDEP) requirements. It does not discuss all of the parameters specified in Table 3 that need to be sampled for during the

abatement phase as part of the community air monitoring. This section must be revised to state that all of the parameters specified in Table 3 will be monitored at all of the community air monitoring locations during the abatement phase. This subsection should also state that the monitoring will occur 24 hours per day, seven days a week, during the abatement phase.

24. The sampling requirements discussed in this subsection should be re-written to state that asbestos TEM samples will be taken for the duration of every work shift and once a day during non-work days during the abatement phase.

Subsection 5.0 Selective Demolition Phase Air Monitoring:

25. The number of, and location of, air monitoring locations referenced in the text of this subsection and Table 2 of this subsection will need to be revised since additional locations will be added.

26. Any references in the text of this subsection, Table 2 of this subsection, or elsewhere in the Abatement and Selective Demolition Plan to excluding monitoring on non-work days of any of the parameters specified in Table 3 (e.g., excluding Saturday and Sunday unless active work is being performed as currently stated in this subsection) need to be stricken.

27. This subsection must be revised to state that all of the parameters specified in Table 3 will be monitored at all of the community air monitoring locations during the selective demolition phase as part of the community air monitoring. This subsection should also state that the monitoring will occur 24 hours per day, seven days a week, during the selective demolition phase. The exception being asbestos, real-time PM₁₀ and PM_{2.5}, and mercury vapor. Asbestos TEM samples which will be taken for the duration of every work shift and once a day during non-work days, while PM₁₀ and PM_{2.5} measurements will be collected on a continuous near “real time” basis, and mercury vapor employing the Lumex instrument.

28. Table 2 uses the term “daily” for all of the parameters but does not state the duration of these “daily” sampling activities. Please clarify for each parameter the duration of each of the “daily” sampling activities (e.g., 24-hours, per work shift, real-time continuous basis, etc.).

29. The semi-volatile organic parameters to be added to Table 3 also need to be added to Table 2 and within the text of this subsection.

30. The last footnote to Table 2 states the following: “Two daily air samples will be collected at each of four sampling locations (asbestos, silica, metals) for any day that work is conducted. That is, a sample for each analyte will be collected and analyzed for each work shift.” This footnote conflicts with language in Table 1 that discusses sampling once per day over a 24-hour period for parameters such as metals and silica. This footnote should be revised to state that monitoring for all of the parameters

referenced in Table 3 will occur 24 hours per day, seven days a week. The exception being asbestos, real-time PM₁₀ and PM_{2.5}, and mercury vapor. Asbestos TEM samples which will be taken for the duration of every work shift and once a day during non-work days, while PM₁₀ and PM_{2.5} measurements will be collected on a continuous near “real time” basis, and mercury vapor employing the Lumex instrument.”

Subsection 6.0 Evaluating Results:

31. The trigger and target levels for the organics monitoring (i.e., dioxins/furans, PCB (total Aroclors), and PAH (benzo-a-pyrene equivalent)) need to be included in Table 3. The levels being used for the other deconstruction projects in the area are identified on the EPA’s webpage: <http://www.epa.gov/wtc>.

32. Cadmium trigger level should be 2ug/m³ not 4ug/m³. Revise Table 3.

33. Zinc trigger level should be 160ug/m³ not 161ug/m³. Revise Table 3.

34. Hexavalent chromium (chromium VI) needs to be added to Table 3. The EPA trigger level for chromium VI is 0.6 ug/m³ and this value needs to be added to Table 3.

35. Asbestos trigger level should be 70 S/mm² (TEM AHERA structures) (note in these units in the table), which equates to 0.022 f/cc not 0.028f/cc. Revise Table 3. Strike-out “(PCMe fibers)” after “Asbestos” in the first column of Table 3.

36. Asbestos target level should be 0.0009 f/cc (SEM PCMe fibers) not 0.00028f/cc. Revise Table 3.

37. A footnote should be added to Table 3 to the column titled “Target Air Quality Levels” and designated as footnote number “1”. The footnote should state the following: “A rolling average after the first week of sampling, except for PM_{2.5} and PM₁₀”.

38. A footnote should be added to Table 3 to the column titled “EPA Site Specific Trigger Levels” and designated as footnote number “2”. The footnote should state the following: “A 24-hour value except for asbestos”.

39. A footnote should be added to the chromium row of Table 3. The footnote should be designated as footnote number “3” and state the following: “If a chromium value is in excess of the Target Air Quality Level (0.6 ug/m³), this will result in a stoppage of work; and, that sample should be speciated for chromium VI to determine that its concentration does not exceed the EPA Site Specific Trigger Level for chromium VI (0.6 ug/m³), and the appropriate actions pertaining to an excess of the EPA Site Specific Trigger Level for chromium VI will continue to be conducted.”

40. The paragraphs following Table 3 in this subsection should be revised to state the following:

“The following actions will be taken if there is an exceedance of any Target Air Quality Level. If there is an exceedance of both the Target Air Quality Level and EPA Site Specific Trigger Level, actions associated with the EPA Site Specific Trigger Level will govern.

Target Air Quality Levels

Any 24-hour PM_{2.5} and PM₁₀ value in excess of the Target Air Quality Level will be considered an “exceedance” and the actions described below will be taken.

During the first week of sampling, any sample of an analyte, other than PM_{2.5} and PM₁₀, in excess of 3 times the Target Air Quality Level for that analyte, unless superceded by an EPA Site-Specific Trigger Level, will be considered an exceedance and the actions described below will be taken.

Following the first week of sampling, a “rolling average” will be established based initially on the first week’s results, to which will be added daily values as results are received from the laboratory. A rolling average value for any analyte, other than PM_{2.5} and PM₁₀, in excess of the relevant Target Air Quality Level will be considered an exceedance of Target Air Quality Level and the actions described below will be taken.

Exceedance of an established Target Air Quality Level for any analyte calculated as provided above will result in an evaluation of engineering controls and work techniques in the source area. This evaluation shall include, but not be limited to, the evaluation of work activities that may be causing the exceedance, smoke testing of the critical barriers in question, and inspection, repair of any faulty critical barriers, and corrective action.

EPA Site Specific Trigger Levels

Any 24-hour value (work shift value on work days or a minimum of a four hour value on non-work days in the case of asbestos) in excess of the EPA Site Specific Trigger Level will be considered an “exceedance.” Exceedances of EPA Site Specific Trigger Levels will result in a stoppage of work associated with the exceedance until an evaluation of emission controls is performed and corrective action is in place. The EPA Site Specific Trigger Levels are applicable to individual sample result. If any of the individual sample results exceed an EPA Site Specific Trigger Level, then notification must be made to the USEPA Region 2 office and the NYCDEP. Work will be reinitiated once the USEPA Region 2 office has agreed (and NYCDEP in the case of asbestos exceedances) to the corrective action(s) proposed to prevent the potential for exceedances in future work and such corrective actions have been implemented.”

Subsection 6.1 Notification:

41. This subsection needs to be re-written to state the following:

“The US EPA Region 2 office (any exceedance) and NYCDEP (asbestos exceedance only) will be notified promptly via phone and electronic mail of any exceedance of either a Target Air Quality Level or an EPA Site Specific Trigger Level and will be notified promptly of any corrective actions taken in connection with a Target Air Quality Level exceedance or an EPA Site Specific Trigger Level exceedance.

In the event of an exceedance of an EPA Site Specific Trigger Level, the owner or its contractor will prepare an exceedance summary report (1-2 pages) stating the nature of the exceedance, causes of the exceedance, and corrective actions taken if it was determined to be associated with activities on-site. The owner or its contractor will also document (i.e., log book, photographs, meteorological conditions, etc.) nearby off-site activity which could have impacted the project site.”

Please be cognizant that successful documentation of off-site activities which have impacted the project site will aid in minimizing stoppage of work.

Subsection 6.2 Monitoring Data:

42. Specify the turn-around time for all of the sample analysis parameters in this subsection.

43. This subsection should be revised to state that all sampling results will be submitted weekly in an electronic format suitable to EPA. 24-hour averages and graphical data for all continuous sampling data are also to be provided and stated in this subsection.

Section 7.0

Waste Sampling and Management Plan

General Comment:

1. Provide a complete Quality Assurance Project Plan (QAPP) that provides details on Quality Assurance/Quality Control (QA/QC) activities for all sampling and analysis activities to be conducted during the abatement and selective demolition of the building, not just the air sampling activities discussed in the current version of the QAPP.

Specific Comments:

Subsection 2.0 Building Components:

2. No list of the current inventory of materials to be removed from the building has been provided. Consequently, if any of the following items are contained within the building, or on the roofs/terraces of the building, these items should be added to the list of materials to be properly handled, managed, and disposed: mercury-containing electrical switches, mercury thermostats, used oil, fuel, and batteries. Additionally, if any of the aforementioned waste streams pertain to the building, the characterization, management, storage, transport, and disposal of these waste streams should be incorporated into the Waste Sampling and Management Plan. Provide a current inventory of materials to be removed and disposed from the building.

3. The materials should be identified in Section 7.0 as either porous or non-porous materials since subsection 1.1 states that installed porous and certain non-porous building materials and components will be removed and disposed while certain installed non-porous building equipment and components will be cleaned and salvaged. All porous materials and those non-porous materials not cleaned should be disposed as asbestos waste at a minimum and based on representative waste characterization sampling of the material.

Subsection 2.1 Contaminants:

4. WTC dust should be added to the bullet item list.

5. The third bullet item should be revised to specify WTC contaminated non-porous materials that will not be cleaned and salvaged as specified in subsection 1.1.

Subsection 2.3 Miscellaneous Materials:

6. Identify and analyze as necessary for toxicity characteristics any lead-sheathed electrical cable/components present. The subsection should be revised to specify this information.

Subsection 3.3 Miscellaneous Materials and Subsection 5.3.5 PPE/Filters:

7. Masterworks should confirm that the personal protective equipment (PPE), filters, and filter media associated with the treatment of wash-down water/liquids are non-hazardous. These subsections should be revised to state that PPE, filters, and filter media will be disposed as asbestos waste at a minimum and depending on the waste characterization results of a representative composite sample. Material determined to be RCRA hazardous, will be handled, packaged, labeled, transported, and disposed of in accordance with appropriate regulatory requirements determined to apply to the waste.

Subsection 4.4 Toxicity:

8. The second to last paragraph should include lead-sheathed electrical cable in the list of miscellaneous materials containing hazardous components.

Subsection 5.2 Deconstruction Waste:

9. This subsection should identify the areas to be sampled. The subsection should describe the preliminary sampling that was conducted and the sampling results. Clarify how the future proposed sampling locations will correlate with the preliminary sampled locations.

Subsection 5.3.1 Light Ballasts and other PCB Wastes and Subsection 7.5 PCB Waste:

10. Historically, PCBs were used as plasticizers in commercial applications such as paints and caulking. Caulking materials manufactured prior to 1978, especially material used to seal windows in masonry building construction, may frequently be found to contain high levels of PCBs at levels, well in excess of 50 parts per million (ppm). When caulking material is being collected from areas such as, windows, coping stone, HVACs, paneling, etc., EPA recommends that the caulking material be sampled and analyzed for PCBs prior to disposal. Caulking material that contains PCBs above the regulated level of 50 ppm would be regulated for disposal as *PCB bulk product waste* (such caulking material at contamination levels exceeding 50 ppm may also constitute New York State hazardous waste pursuant to 6 NYCRR, Part 371, Section 371.4(e).). EPA recommends that the Waste Sampling and Management Plan be revised to incorporate the approach to be taken for caulking known and/or found to contain PCBs in excess of 50 ppm, the characterization/analytical method to be used, and final disposal options.

Subsection 7.0 Waste Packaging and Storage:

11. This subsection does not identify the location of the locked waste storage areas. Is it referenced in Appendix F? If so, this subsection should state this fact. Appendix F, Site Logistics Plan, has a drawing which shows the location of the storage containers for friable and non-friable asbestos waste. However, the drawing should also show the location of the storage area(s) for the other waste streams (e.g., hazardous waste, PCB

ballasts, etc.) specified in Section 7.0, Waste Sampling and Management Plan. Clarify if the locked waste storage areas will be inside or outside of the containment areas.

Subsection 7.4 Exterior Wash Water:

12. The title of this subsection implies that the conditions specified within the subsection only apply to exterior wash water. The conditions specified under subsection 7.4 should be applied to the exterior wash water and its use during any other aspects of this deconstruction project as well (e.g., any other exterior works, as an engineering control during abatement activities, decon showers, etc.). Has a NYCDEP discharge permit been acquired yet? If not, what is the timing of acquiring it?

Section 8.0 Quality Assurance Program Plan (QAPP)

General Comments:

1. Please be cognizant that many of the comments above on the Specification for Community Air Monitoring (e.g., parameters to be sampled and analyzed, target and trigger levels, duration, number of air sampling stations, etc.) will impact the requirements and information already within the Quality Assurance Program Plan (QAPP) and what additional information needs to be included within the QAPP.
2. There is no mention of sampling or analysis for dioxins/furans, PCBs, PAHs, and total mercury (particulate associated and vapor). These contaminants should be sampled, analyzed and discussed in the QAPP.
3. The QAPP should include sample copies or illustrations of the following: sample numbering scheme, sample label, chain of custody form, custody seal, field sampling data sheet, and the like.
4. How will this project communicate the sampling data and analysis results to the regulatory agencies?

Specific Comments:

Subsection 1.0 Project Responsibilities:

5. Identify in this subsection the laboratories that will be conducting the various analyses.

Subsection 2.4 Evaluation of Monitoring Results:

6. In Tables 1 and 2 of the QAPP, the “Action Level” entries for chromium and PM_{2.5} are not consistent with the respective “Target Air Quality Level” values cited in Table 3 of Section 4.0, *Specification for Community Air Monitoring* (Specification). In addition, both documents need to use consistent terminology with regard to the “levels” to improve clarity.

Analyte	Action Level Quality Assurance Program Plan	Target Air Quality Level Specification for Community Air Monitoring
Chromium	5 ug/m ³	0.6 ug/m ³
PM _{2.5}	65 ug/m ³ (NAAQS - 24-hour average)	40 ug/m ³ (NAAQS - 24-hour average)

7. Why does the QAPP discuss the Target Air Quality Levels and the actions to be taken if there is an exceedance of those levels but does not discuss the Site Specific Trigger

Levels and the actions to be taken if there is an exceedance of these levels? The actions and notifications to be taken for each “level” are different, so if the QAPP is going to discuss one of these levels it needs to also discuss the other level. The QAPP should be revised to address both the Target Air Quality Levels and the Site Specific Trigger Levels and the actions to be taken for each if they are exceeded.

8. The actions to be taken if there is an exceedance of the Target Air Quality Levels should be revised to be consistent with the comments provided above within Section 4.0 (Specification for Community Air Monitoring) for dealing with exceedances of these levels. See also the comments above within Section 4.0 (Specification for Community Air Monitoring) for dealing with exceedances of the Site Specific Trigger Levels. The QAPP should be consistent with these comments as well.

9. Asbestos target level should be 0.0009 f/cc (SEM PCMe fibers) not 0.00028f/cc. Revise Table 2.

10. This subsection needs to state within the tables the Target Air Quality Levels and the Site Specific Trigger Levels for the organic parameters.

Subsection 2.6 Decision Making Rule:

11. This subsection needs to be revised. It is not fully consistent with the procedures and notification process outlined in Section 4.0 (Specification for Community Air Monitoring) for dealing with both an exceedance of the Target Air Quality Levels and an exceedance of the Site Specific Trigger Levels. See also the comments above for Subsections 6.0 (Evaluating Results) and 6.1 (Notification) of Section 4.0 (Specification for Community Air Monitoring). The QAPP should be consistent with these comments as well.

Subsection 2.7 Limits on Decision Errors:

12. This subsection discusses actions to be taken for exceedances of the Site Specific Trigger Levels. This subsection should also discuss the actions to be taken for exceedances of the Target Air Quality Levels.

Subsection 3.1.1 Observations of Visible Emissions:

13. Strike-out “exterior” prior to “containment barriers” in the first sentence.

Subsection 3.1.2 Measurement and Data Acquisition – Air Monitoring:

14. In this subsection, the QAPP needs to provide detailed description of the sampling procedures to be employed for each analyte and a summary of the required equipment. Describe how sampling air flow rates will be determined. Requirements and criteria for calibrations and leak checks also need to be included. Step-by-step operating procedures can be included as an attachment(s).

Subsection 3.1.3 Measurement and Data Acquisition – Air Sampling and Analysis Methods Requirements:

15. In this subsection, the QAPP needs to show that air sampling at the minimum sampling rates will be sufficient such that the measurements are adequate for use in evaluation with the respective target and trigger action levels. Table 1 within the QAPP can be expanded, or a new table generated, to include sampling rates, expected sample volumes, laboratory quantitation limits, and laboratory reporting limits.

Subsection 3.1.4 Measurement and Data Acquisition – Field QA/QC Samples:

16. There is no plan to collect duplicate (referred to as replicate in the QAPP Glossary) samples according to both the QAPP and the Specification. The rationale provided in subsection 3.1.4 of the QAPP does not justify this decision. The community air monitoring locations referenced within the QAPP are not collocated so their results cannot be considered as duplicate measurements. Other Lower Manhattan demolition/deconstruction projects have collocated duplicate sampling equipment, on a rotating schedule basis, to collect duplicate samples. These duplicate samples are used in assessing precision and representatives of the regular samples and the field sampling program. The QAPP needs to include duplicate sample collection.

Subsection 3.3 Analytical Methods and Requirements:

17. In this subsection, the QAPP needs to document any expected modifications to the analytical methods. Since the target and trigger levels for the analytes are defined, the process to attain the required levels of detection should be explained.

Subsection 10.0 Procedures to Evaluate Data Precision and Accuracy:

18. In this subsection, the QAPP needs to state the acceptance criteria for the accuracy and precision assessments.